

In the claims:

E2 28. (Amended Twice) A method for enhancing the formation and development of dendrites and synapses in hippocampal neurons, comprising contacting said neurons with a morphogen selected from: an OP-1 polypeptide, a BMP-2 polypeptide, a BMP-5 polypeptide, a BMP-6 polypeptide, or a 60A polypeptide, wherein said morphogen has a conserved C-terminal seven-cysteine skeleton at least about 60% identical to residues 330-431 of human OP-1 (SEQ ID NO: 2), and wherein said morphogen induces dendrite outgrowth in said hippocampal neuron.

29. (Reiterated) The method of claim 28, wherein said morphogen comprises residues 30-292 of SEQ ID NO: 2.

30. (Reiterated) The method of claim 28, wherein said morphogen comprises residues 330-431 of SEQ ID NO: 2.

31. (Reiterated) The method of claim 28, wherein said morphogen comprises residues 48-292 of SEQ ID NO: 2.

32. (Reiterated) The method of claim 28, wherein said morphogen comprises the amino acid sequence of SEQ ID NO: 2.

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E3 46. (Amended) The method of claim 28, wherein said morphogen comprises residues 293-329 of SEQ ID NO: 2.

47. (Amended) The method of claim 28, wherein said morphogen comprises residues 293-431 of SEQ ID NO: 2.

48. (Reiterated) The method of claim 28, wherein said morphogen comprises residues 30-431 of SEQ ID NO: 2.

Please add the following new claims:

52. (New) A method for enhancing the formation and development of dendrites and synapses in hippocampal neurons, comprising contacting said neurons with a morphogen selected from: an OP-1 polypeptide, a BMP-2 polypeptide, a BMP-5 polypeptide, a BMP-6 polypeptide, or a 60A polypeptide, wherein said morphogen has a conserved C-terminal seven-cysteine skeleton at least about 70% homologous to residues 330-431 of human OP-1 (SEQ ID NO: 2), and wherein said morphogen induces dendrite outgrowth in said hippocampal neuron.
53. (New) The method of claim 52, wherein said morphogen comprises residues 30-292 of SEQ ID NO: 2.
54. (New) The method of claim 52, wherein said morphogen comprises residues 330-431 of SEQ ID NO: 2.
55. (New) The method of claim 52, wherein said morphogen comprises residues 48-292 of SEQ ID NO: 2.
56. (New) The method of claim 52, wherein said morphogen comprises the amino acid sequence of SEQ ID NO: 2.
57. (New) The method of claim 52, wherein said morphogen comprises residues 293-329 of SEQ ID NO: 2.
58. (New) The method of claim 52, wherein said morphogen comprises residues 293-431 of SEQ ID NO: 2.
59. (New) The method of claim 52, wherein said morphogen comprises residues 30-431 of SEQ ID NO: 2.

*The claims presented above incorporate changes as indicated by the marked-up versions below.*

28. **(Amended Twice)** A method for enhancing the formation and development of dendrites and synapses in hippocampal neurons ~~cells~~, comprising contacting said neurons ~~cells~~ with a morphogen selected from: an OP-1 polypeptide, a BMP-2 polypeptide, a BMP-5 polypeptide, a BMP-6 polypeptide, ~~and~~ or a 60A polypeptide, wherein said morphogen has a conserved C-terminal seven-cysteine skeleton at least about 60% identical to residues 330-431 of human OP-1 (SEQ ID NO: 2), and wherein said morphogen induces dendrite outgrowth in said hippocampal neuron.
46. **(Amended)** The method of claim 28, wherein said morphogen comprises residues ~~292-330~~ 293-329 of SEQ ID NO: 2.
47. **(Amended)** The method of claim 28, wherein said morphogen comprises residues ~~292-431~~ 293-431 of SEQ ID NO: 2.